Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, DC 20554

In the Matter of:	
Federal-State Joint Board on Universal Service: Promoting Deployment and Subscribership in Unserved and Underserved Areas, Including Tribal and Insular Areas	**CC Docket No. 96-45**

To the Commission:

COMMENTS OF MOTOROLA AND IRIDIUM NORTH AMERICA

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Motorola, Inc. ("Motorola") and Iridium U.S., L.P. d/b/a Iridium North America ("INA") by their attorneys, hereby submit these comments in response to the Further Notice of Proposed Rulemaking ("FNPRM") issued in the above-captioned proceeding.[1] Space System License, Inc., a wholly owned subsidiary of Motorola, has been licensed by the Commission to construct, launch and operate the Iridium system, a global Mobile Satellite Service ("MSS") system comprised of 66 operational satellites in low-Earth orbit.[2] Motorola is also a major

[1] *In the Matter of, Federal State Joint Board on Universal Service: Promoting Deployment and Subscribership in Unserved and Underserved Areas, Including Tribal and Insular Areas*, Further Notice of Proposed Rulemaking, CC Docket No. 96-45, FCC 99-204 (rel. Sep. 3, 1999), 64 Fed. Reg. 52,738 (Sep. 30, 1999) (all citations to the FNPRM hereinafter refer to FCC 99-204 as released on Sept. 3, 1999).

[2] *See Application of Motorola Satellite Communications, Inc. for Authority to Construct, Launch and Operate a Low Earth Orbit Satellite System in the 1616-1626.5 MHz Band*, Order and Authorization, 10 FCC Rcd. 2268 (Int'l Bureau 1995), Erratum, 10 FCC Rcd 3925 (1995), Modification, 11 FCC Rcd. 13952 (1996), *reconsideration denied*, 11 FCC Rcd. 18502 (1996).

manufacturer of mobile radio devices including Iridium system handsets as well as cellular, Personal Communications Systems, private radio and public safety equipment. INA is a common carrier that offers Iridium services in North America. The Iridium system has the capability of providing voice, fax, paging, and low rate data transfer services to remote areas on Earth including tribal lands and all other areas currently underserved or unserved by telecommunications carriers in the United States and its territories.

I. SUMMARY

The Iridium system currently has the technical capacity to provide telecommunications services to all areas of the United States, including those that are the subject of this proceeding. However, the economies of many Indian reservations appear unable to support state-of-the-art telecommunications services, whether wireline, wireless or satellite. Reliance on universal service fund ("USF") support appears to represent the only method of providing affordable telecommunications services to communities in these unserved areas. In order to ensure affordable Iridium services to those areas, however, a number of regulatory and financial impediments contained in the USF rules must be tempered.

Most importantly, the Commission must be prepared to modify the USF system to better accommodate telecommunications services provided by satellite. For example, the Commission must apply its definition of "supported services" in a technologically neutral manner, designating eligible telecommunications carriers ("ETCs") in a way that will allow them to provide telecommunications services to tribal lands and other unserved areas more quickly. Further, the Commission should declare tribal lands to be separate "study areas" in order to provide an increased level of USF financial support to carriers wishing to serve these high-cost areas, i.e., tribal lands and other unserved areas. Moreover, the Commission should explicitly

state that the provision of satellite telephones qualifies for Link Up support. Lastly, if a competitive bidding system is adopted for determining the universal support needs of tribal lands, the Commission should permit bidders to enter joint ventures and subcontract arrangements with other carriers, in order to assure that the most efficient and cost effective mix of wireline, wireless and satellite telecommunications technologies are provided to these subscribers.

II. BACKGROUND

Congress has directed the Commission to develop rules and policies to help ensure that all Americans have access to affordable telecommunications services.[3] While telephone subscribership in the United States is currently at a relatively high level (94%), American Indians who reside on tribal lands have not enjoyed the full range of benefits of the telecommunications revolution. In fact, the average telephone subscription rate for Indians living on tribal lands is reportedly less than 50%, and numerous Indian communities remain completely unserved.[4]

All unserved areas in the U.S. should have affordable basic telecommunications services as soon as possible. As the Commission indicated, "telephone service is a necessity in our modern society."[5] A lack of basic telecommunication services subjects people to significant medical risks, hinders employees' ability to find and retain jobs, reduces the quality and

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[3] *Telecommunications Act of 1996*, Pub. L. No. 104-104, § 706, 110 Stat. 153, (1996) (codified at 47 U.S.C. § 157) ("Act of 1996").

[4] FNPRM, *Separate Statement of Commissioner Gloria Tristani*, FCC 99-205, at 99.

[5] NPRM, ¶ 2.

efficiency of the education system, increases law enforcement response times, and silences the citizens' political voice.[6]

In order to fulfill its Congressional mandate, the Commission has initiated this rulemaking proceeding – CC Docket No. 96-45[7] – and issued a companion Notice of Proposed Rule Making in WT Docket No. 99-266.[8] In both proceedings, the Commission seeks comment on ways to provide much needed telecommunications services to underserved and unserved areas in the United States, including Indian tribal lands.

In its FNPRM, the Commission focuses on issues relating to proposed changes in the administration and implementation of the Universal Service Fund ("USF") in order to accelerate the provision of telecommunication services to unserved areas in the United States and to tribal lands.[9] The Commission specifically requests comment, among other things, on USF

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[6] FNPRM, ¶ 2.

[7] FNPRM, FCC 99-204, ¶ 1.

[8] *In the Matter of Extending Wireless Telecommunications Services to Tribal Lands*, Notice of Proposed Rulemaking, WT Docket No. 99-266, FCC 99-205 (rel. Aug. 18, 1999), 64 Fed. Reg. 49,128 (Sep. 10, 1999) ("NPRM") (all citations to the NPRM hereinafter refer to FCC 99-205 as released on Aug. 18, 1999). This proceeding addresses the potential of satellite and terrestrial-wireless technology to provide basic telecommunications services to tribal lands. *See* Comments of Motorola, Iridium North America and Iridium LLC (Nov. 9, 1999); Reply Comments of Motorola, Iridium North America and Iridium LLC (Dec. 9, 1999).

[9] FNPRM, ¶ 9. The Commission has addressed this issue on prior occasions. *See, e.g., Notice of the Second Hearing in a Series of Hearings about Telephone Service for Indians on Reservations, and a Request for Comment from the General Public about Issues relevant to that Subject*, 64 F.R. 12809 (Mar. 15, 1999) ("Overcoming Obstacles Proceeding: Arizona Hearing"); In the Matter of *The Establishment of Policies and Service Rules for the Mobile Satellite Service in the 2 GHz Band*, 64 F.R. 16880 (Apr. 17, 1999) ("2 GHz Proceedings"); Comments of Motorola (May 28, 1999) *in* Telephone Service for Indians on Reservations (supporting the Commission's efforts toward delivery of cost effective telecommunications services to unserved areas); Comments of Iridium LLC (Jun. 24, 1999) *in* 2 GHz Proceedings (urging the Commission to encourage delivery of telecommunications services to unserved areas by use of incentives that are unrelated to satellite licensing policies).

mechanisms that tend to restrict deployment of satellite and wireless telecommunications services on tribal lands and unserved areas. "Satellite networks, used either on a stand alone basis or in combination with a terrestrial wireless network, may offer a cost advantage over wireline or other alternatives in remote areas where a limited population may not provide the economies of scale to support the deployment of wireline or other networks for each community."[10] Motorola and INA urge the Commission to eliminate all such USF barriers, in order to facilitate the prompt provision of affordable satellite and wireless technologies to tribal lands and other unserved areas.

III. THE IRIDIUM SYSTEM CAN EFFICIENTLY PROVIDE TELECOMMUNICATIONS SERVICES TO TRIBAL LANDS AND OTHER UNSERVED AREAS TODAY

The Commission specifically seeks comment regarding the particular characteristics of satellite systems that qualify them for serving tribal lands and other unserved areas in the United States.[11] The Iridium system is technically capable of providing telecommunications services to these areas today, offering an immediate solution to the Commission's goal of bringing affordable telecommunications services to Indians on tribal lands.

The Iridium system is a global satellite-based network fully capable of offering voice, fax, paging, and low rate data transfer services to tribal communities in geographically remote areas where rough terrain and low population density renders terrestrial service impractical and inordinately expensive. The Iridium system is, therefore, ideally positioned to

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[10] FNPRM, ¶ 19.

[11] *Id.*

provide an immediate solution to the technical and economic challenges of providing telecommunications services to unserved and underserved areas in the country.

A. Satellite Telephones Are Available Now

Iridium handheld portable satellite telephones (single and dual-mode handheld telephones), mobile telephones, MXUs,[12] and pagers are now available throughout the United States to facilitate provision of a broad range of telecommunications services to residents of unserved areas. These terminals can be used in vehicles as emergency dispatch telephones; in central locations to serve groups, perhaps on a payphone-like basis; or in individual residences. The Iridium network is an operating satellite system that can offer telecommunications services to tribal areas today using any of these types of terminals.

B. Dual-Mode Satellite Telephones Can Provide Additional Capabilities to Residents of Unserved Areas

In some tribal lands and other unserved areas, a combination of terrestrial wireless and satellite technologies could provide a broader and more economical range of services. Dual-mode telephones permit automatic access to wireless facilities when residents travel to more populated areas allowing the use of terrestrial systems to supplement the satellite service. Such dual-mode Iridium telephones are already in use and are readily adaptable to many authorized local wireless networks, allowing Iridium subscribers to roam on those networks.

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[12] A MultiExchange Unit ("MXU") is a multi-channel unit that can be used in various specialized applications such as connecting existing telephone equipment associated with a Private Branch Exchange (PBX) or Public Switched Telephone Network (PSTN) to the Iridium network. It could provide the platform for pay telephone service to an Indian reservation service area. In addition to fixed applications, some MXU products are designed for portable applications and some for mobile usage as in the case of maritime applications. In some locations that do not offer unobstructed access to the Iridium satellite, such as in an office building, an external antenna can be used to augment reception.

IV. THE COMMISSION SHOULD ELIMINATE OR MITIGATE THE IMPEDIMENTS TO INCREASED TELEPHONE SERVICE PENETRATION

The Commission requests commenters to identify and explain the nature of impediments to higher telecommunications service penetration rates in unserved high-cost areas, and propose possible solutions.[13] Five major categories are identified in the FNPRM: regulatory, financial, demographic, geographic and cultural impediments.[14] The Iridium system inherently overcomes all demographic, geographic and cultural impediments, and the Commission itself can mitigate the remaining regulatory and financial impediments.

A. The Iridium Satellite System Inherently Overcomes Demographic and Geographic Impediments to Extending Telecommunications Services to Tribal Lands and Other Unserved Areas

Many subscribers in unserved areas remain unserved because they are located in sparsely populated, geographically remote areas where rough terrain and economies of scale render terrestrial service impractical and inordinately expensive. For example, the average line extension charge for the Navajo Communications Company in 1997 was reportedly more than $40,000 per loop.[15] Eight loops cost more than $100,000 each, and one loop cost over $157,000.[16] Moreover, constructing terrestrial loops over rough terrain to rural areas is very time

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[13] FNPRM, ¶ 20-21.

[14] FNPRM, ¶ 20-31

[15] FNPRM, ¶ 23, *citing* Navajo Communications Company, response to Arizona Corporation Commission Data Request, ACC Docket No. T-2115-97-640 (Unserved Areas), Jun. 19, 1998 at attachment B (placed on the record of CC Docket No. 96-45); Overcoming Obstacles Proceeding: Arizona Hearing, Testimony of James Irvin, Commissioner Chairman, Arizona Corporation Commission, at 147.

[16] *Id.*

consuming. In contrast, the Iridium satellite system is already constructed and its coverage is ubiquitous. The Iridium system can immediately provide telecommunications services to subscribers in these remote areas at the same cost as mobile satellite services provided elsewhere.

After an Iridium telephone is delivered to a subscriber, that subscriber's location is immaterial to the cost of providing satellite telecommunications services. Because the Iridium satellite system covers all of the United States and its territories, the cost of providing service to sparsely-populated, geographically remote areas is equivalent to the cost of providing service to densely-populated metropolitan or urban areas, and in both cases the cost of providing satellite service averaged over the entire subscriber base, should be less expensive than the average Navajo line extension charge. Demographic and geographic factors have virtually no effect on satellite service,[17] and the Iridium system resolves the technical and economic challenges of providing telecommunications services to tribal lands.

B. INA Can Provide Telecommunications Services Without Adversely Affecting Indian Culture, Identity or Religion

The Commission recognizes the importance of preserving Indian culture, identity and religious values.[18] These factors must be addressed since they are important in and of themselves and they affect the willingness of tribal authorities to support the availability of

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[17] To use the Iridium satellite system, there must be direct line of sight to the satellites.

[18] FNPRM, ¶ 25; s*ee* Overcoming Obstacles Proceeding: Arizona Hearing, Testimony of Eagle Rael, Bovernor, Picuris Pueblo, at 58 (describing reluctance to bury telephone cables near ceremonial sites); *see also* Comments of Motorola, Iridium North America and Iridium LLC, at 5-6 *in* NPRM; *see also* Comments of Motorola, at 1 (May 28, 1999) *in* Telephone Service for Indians on Reservations.

telecommunications services in their communities.[19] The open landscape environment on many Indian reservations plays a central role in Indian culture and some Indian religions. Numerous traditional tribes believe the existing environment has spiritual as well as physical qualities. The universe is defined as a living system that contains both material and spiritual parts, and changes to the material parts alter the spiritual parts.

Placing terrestrial wireline or wireless structures across tribal land could jeopardize the essence of the environment necessary for conservation of some Indian cultures, religion and identities.[20] Likewise, construction of large-scale infrastructure projects including buried wireline cables can desecrate known and undiscovered sacred sites such as ancient Indian burial grounds. This may help explain prior resistance to telecommunications services on some Indian reservations.[21]

Satellite telephones constitute the least intrusive method of providing telecommunications services to tribal lands. Most satellite services do not require any significant construction on the ground; the only required hardware for the Iridium system is the satellite receiver itself (i.e. telephone or pager). The Iridium handheld portable telephones and pagers can also be used outdoors without affecting the environment, and fixed terminals can be used

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[19] *Id.*

[20] Overcoming Obstacles Proceeding: Arizona Hearing, Testimony of Eagle Rael, Bovernor, Picuris Pueblo, at 58 (describing reluctance to bury telephone cables near ceremonial sites).

[21] *Id.; AB Fillins, Petition for a Declaratory Ruling Preempting the Authority of the Tohono O'odham Legislative Council to Regulate the Entry of Commercial Mobile Radio Service to the Sells Reservation Within the Tucson MSA,* Market No. 77, *Memorandum Opinion and Order*, 12 FCC Rcd 11755 (1997) (affirming a tribal legislative council's decision to prevent the location of cellular sites on its tribal lands).

indoors with limited outdoor construction. Both types of units support the preservation of the Indian environment and landscape.[22]

C. The Commission Should Update the Universal Service System to Ameliorate Financial and Regulatory Impediments to Increased Telecommunications Service Penetration in Unserved Areas by Satellite

Generally, the economies of many Indian reservations appear unable to support state-of-the-art telecommunications services, whether wireline, wireless or satellite. Reliance on USF support appears to represent the only method of providing affordable telecommunications services to communities in these unserved areas. The Commission specifically asks "whether any aspect of the universal service rules deters carriers from providing service to unserved and underserved areas."[23] The following discussion notes several such impediments that deter satellite carriers from extending affordable telecommunication service to unserved areas, and possible solutions.

1. The Commission Must Update the Universal Service System to be Sensitive to Satellite and Wireless Technologies

The Commission has laudably adopted a policy of competitive neutrality dictating that universal service support mechanisms and rules should "neither unfairly favor nor disfavor one technology over another."[24] In order to further this policy, cost allocation formulas must be updated in order to be more useful to satellite and wireless providers.

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[22] The Iridium satellite service also eliminates contentious right-of-way issues raised by the Right of way Act of 1948. 25 U.S.C. §§ 232, 324-325; FNPRM, ¶27. The Iridium system does not require construction of heavy infrastructure on tribal land; therefore, it eliminates any right-of-way impediments to providing telecommunications services to tribal lands today.

[23] FNPRM, ¶ 28.

[24] *In the Matter of Federal-State Joint Board on Universal Service,* Report and Order, CC Docket No. 96-45, 12 FCC Rcd 8776 (1997), as corrected by Errata, CC Docket No. 96-45 (rel.

(Continued ...)

Currently, the cost accounting and jurisdictional rules focus on wireline services.[25] For example, the existing support mechanism for high-cost areas in the hold-harmless provision calculates each carrier's share of the support by analyzing the carrier's loop costs,[26] but satellites don't have loop costs. The rules fail to delineate which satellite costs should be factored into this calculation. The Commission should either clarify which costs a satellite provider may use to calculate the loop costs of providing satellite telecommunications services or explicitly acknowledge that a satellite retailer's national telecommunications rate is, in fact, equivalent to its costs. INA's "loop costs" vary with the amount of time a subscriber uses the telephone, but universal service support provisions do not account for this kind of per-minute marginal cost.

2. The Commission Should Interpret Its Definition of Supported Services In a Flexible Manner to Meet the Needs of Unserved Areas

The Commission asks whether existing satellite infrastructure could be adapted to provide the services supported by the universal service fund,[27] and whether "the definition of

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June 4, 1997) ("First Report and Order"). Competitive neutrality dictates that universal service support mechanisms and rules should "neither unfairly favor nor disfavor one technology over another." Id.

[25] *See, e.g.,* 47 C.F.R. Parts 36, 54, and 69.

[26] FNPRM, at n.12 ("The existing high-cost universal service support mechanism provides increasing amounts of support based on the percentage by which a carrier's loop costs exceed the national average cost per loop, beginning with loop costs greater than 115 percent of the national average cost per loop.").

[27] FNPRM, ¶16.

supported services deter[s] terrestrial wireless or satellite service providers from providing services in these areas."[28]

While this definition of supported service may deter some satellite companies from obtaining USF support, INA and other Iridium service providers can provide many of these services already and could provide other services that are comparable to the supported universal services with some software and other adjustments.[29] Therefore, the Commission need not change its rules in this regard, but should apply them in a flexible manner so as to allow for satellite service providers, such INA, to meet the existing definitions.

INA currently provides single-party service, voice-grade access to the public switched network, DTMF signaling, and access to interexchange service. Iridium satellite-mode telephones cannot provide access to emergency 911 services with automatic location information ("ALI"), but they can be used to contact any police station, fire department or hospital using

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[28] FNPRM, ¶ 28. The USF currently supports the following services: (1) single-party service, (2) voice-grade access to the public switched network, (3) dual tone multi frequency ("DTMF") signaling or its functional equivalent, (4) access to interexchange service, (5) access to emergency services, (6) access to operator services, (7) access to directory assistance, (8) toll limitation services for qualifying low-income consumers, and (9) local usage minutes. 47 C.F.R. § 54.101(a).

[29] Motorola, INA, and Iridium strongly urge the Commission not to order satellite telecommunications carriers to provide services to unserved areas under the Act of 1996 § 214(e)(3) (giving the Commission the power to order carriers to serve unserved markets); FNPRM, ¶ 83. Currently, this provision and the USF rules are inappropriate estimators of the costs satellite telecommunications providers incur in extending service to subscribers. Until the USF provisions are modernized to more accurately estimate the actual costs of providing satellite service, the Commission should refrain from ordering satellite carriers to provide service to unserved areas. *See also* FNPRM, ¶ 116 (listing several other arguments against ordering carriers to provide service to unserved areas).

direct dial numbers. Indeed, it is quicker to dial an emergency service using the Iridium memory dialing capability than dialing "911."

While INA does not provide traditional operator or directory assistance, a user currently can obtain operator and directory assistance simply by calling a telephone carrier's toll free number. Moreover, INA could provide "local usage minutes" as part of a calling plan using the whole state in which the caller is located as the "local area." Lastly, INA could provide an adapted toll limitation program that would temporarily suspend an account's service upon reaching a pre-designated billing amount.

Satellite services are uniquely capable of providing a range of services to areas in the United States that otherwise might never benefit from modern telecommunications. However, making such services affordable so unserved areas can enjoy the benefits of the telecommunications age may require the Commission to accept the inherent features and capabilities of satellites under its USF umbrella.

3. The Commission Should Allow Tribal Authorities to Designate Eligible Telecommunications Carriers[30]

Generally, the Commission is responsible for designating ETCs when a state does not assert jurisdiction over the carrier.[31] States do not have jurisdiction over satellite telecommunications providers serving tribal lands.[32] In making designation decisions for carriers

[30] An ETC is defined as a carrier designated by the state or the Commission to provide the services supported by the universal service fund. *See* 47 C.F.R. 54.201; *see also,* note 27 *infra* at 13 (listing the services supported by the USF).

[31] *See* FNPRM, ¶ 78; Act of 1996 § 214(e)(6).

[32] *See Id.*; *but see* FNPRM, ¶81 (recognizing that some state commissions regulate some aspects of a carrier's services provided on tribal lands).

serving tribal lands, however, the Commission should take into consideration the views of the local tribal authority.

The Commission should also consider giving tribal authorities independent jurisdiction to designate ETC carriers for tribal lands. Tribal governments are best equipped to determine what telecommunications modes and services are best for their constituents and may prefer the USF to support a different mix of services.[33] For example, an Indian reservation with many unserved residents may prefer to first ensure that each resident can receive basic telephone service before shifting its efforts to providing the full package of universal services.[34]

4. The Commission Should Declare Tribal Lands to be Separate "Study Areas"

The Commission seeks comment on modifications to the study area rules to permit carriers to treat tribal lands as separate and distinct study areas.[35] Motorola and INA urge the Commission to create separate tribal land study areas in order to increase the universal service support available for providing service to these high-cost areas. Additional support would make telecommunications services in these areas more affordable for subscribers and telecommunications service providers.

The Act of 1996 and the study area rules enable the Commission, in consultation with the affected states, to redefine study locations for rural areas such as tribal lands.[36]

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[33] FNPRM, ¶ 49 ("Some tribes may prefer support for terrestrial wireless or satellite services, rather than wireline services.").

[34] *Id.*

[35] FNPRM, ¶ 64.

[36] *See* 47 U.S.C. § 214(e)(5); 47 C.F.R. §54.207(d).

Furthermore, the Commission has noted that "the trust relationship between the federal government and Indians as well as principles of tribal sovereignty suggest that the federal government may have the authority to implement particularized measures to address the factors causing the unusually low subscribership on tribal lands."[37]

The Commission should exercise its authority and define each tribal land area to be a separate study area, because it would alleviate numerous factors causing the low subscribership rate on tribal lands. The Commission observes that the current averaging system combined with the freeze on study area boundaries creates "strong financial disincentives to serving unprofitable high-cost customers ...."[38] An independent local exchange carrier ("ILEC") whose average study-area loop cost is below the national benchmark[39] receives no high-cost support for building and servicing a new high-cost loop in the study area.[40] Competitive Local Exchange Carriers ("CLECs") can only receive what the ILEC would receive; therefore, the disincentives that apply to ILECs also apply to CLECs contemplating extending service to high-cost areas.

Creating new and separate study areas for tribal lands would portray a more accurate picture of the relevant costs of providing service to these areas and, thereby, curb the

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[37] FNPRM, ¶ 32; *see also* FNPRM, ¶¶ 34-38.

[38] FNPRM, ¶63. The averaging system

[39] Currently at 115% of the average national loop cost. FNPRM, ¶ 63

[40] Furthermore, even an ILEC whose average study area loop cost is above the national benchmark would only receive a small portion of the actual cost of servicing a new high-cost loop if the cost of the new loop is greater than the ILEC's average loop cost, and the supported portion shrinks further as the cost of a loop increases.

negative effects of the USF averaging system. Establishing separate tribal-land study areas would help develop more appropriate incentives for potential service providers to extend service to tribal lands. In addition, it would spur competition between carriers to negotiate with tribal authorities for serving their residents.

5. The Commission Should Target Support Amounts in Proportion to Wire Center Costs

The Commission should also consider targeting USF support amounts in proportion to wire center costs rather than basing them on the number of local loops, in order to provide greater financial support to technologies, such as satellites, that can provide telecommunications services to Indian tribal areas immediately. The Commission concluded in its forward-looking cost model proceedings that all high-cost support for non-rural carriers should be targeted to wire centers in proportion to their average loop costs.[41] Targeting wire centers in proportion to their average loop costs helps reduce market distortion, encourage portability of high-cost funds and ensure that high-cost funds are directed towards the loops that need them.[42] Likewise, the Commission can avoid market distortion on tribal lands and encourage portability of funds by targeting wire centers, or their functional equivalent, in proportion to their costs.[43]

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[41] Eighteenth Order on Reconsideration, ¶ 70

[42] Eighteenth Order on Reconsideration, ¶¶ 70-76.

[43] *See Id.*; *Tribal Autonomy* discussion *supra*. Following the policies applied to the States, however, tribal authorities should also be allowed to petition the Commission to target an area different than the wire center such as the Unbundled Network Element ("UNE"), because under some circumstances, using a different target area may be more efficient. Eighteenth Order on Reconsideration, ¶ 70.

6. The Commission Should Expand the Link Up Program to Include Satellite Services

The Link Up program, which is intended to offset initial connection charges to high-cost areas, is inadequate in its current form.[44] Currently, universal service fund support for line extensions is limited to $30 and one year's worth of interest on $200 even if the line extension to the subscriber costs thousands of dollars.[45] As noted earlier, the average line extension charge for the Navajo Communications Company in 1997 was more than $40,000 per loop.[46] As the Arizona Corporation Commission stated, low-income consumers are unable to afford such charges, and existing USF subsidies are inadequate.[47] The Commission should clarify its rules and explicitly state that issuance and activation of satellite telephones qualify for Link Up support.

The Commission should also eliminate other ambiguities in the rules, such as the extension or service-commencement charges, as applied to satellite telecommunications services. Issuing a satellite telephone to a subscriber and activating that telephone is analogous to

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[44] Proposal of the Arizona Corporation Commission For Distribution of Federal USF Funds to Establish Service to Low-Income Customers in Unserved Areas, or in the Alternative, for Amendment of the May 8, 1997 Report and Order to Provide for Federal USF Distribution for This Purpose, at 5 (Apr. 28, 1998) *in* In the Matter of *Federal-State Joint Board on Universal Service*, CC Docket No. 96-45 ("Arizona Proposal"); *see* FNPRM, ¶¶ 119-121; 47 C.F.R. § 54.411.

[45] *See* 47 C.F.R. §§ 54.411(a)(1) & (2).

[46] Eight loops cost more than $100,000 and one was over $157,000. FNPRM, ¶ 23, *citing* Navajo Communications Company, response to Arizona Corporation Commission Data Request, ACC Docket No. T-2115-97-640 (Unserved Areas), Jun. 19, 1998 at attachment B (placed on the record of CC Docket No. 96-45); Overcoming Obstacles Proceeding: Arizona Hearing, Testimony of James Irvin, Commissioner Chairman, Arizona Corporation Commission, at 147. *Id.*

[47] *See* Arizona Proposal at 5.

extending wireline serve to that subscriber's residence.[48] Furthermore, the Commission should clarify that the customary charges for acquiring and activating a satellite telephone constitute "customary charge[s] for commencing telecommunications service."[49]

7. ETCs Should be Permitted to Joint Venture or Subcontract

The Commission has proposed a competitive bidding system to determine the appropriate level of USF support for unserved tribal lands. If such a system is adopted, the Commission should allow any carrier that meets a tribal authorization requirement to participate in the bidding process to enter joint ventures and/or subcontracts for the provision of telecommunications services.

It is important that the Commission not prevent ETCs from entering into joint ventures and subcontracts for the provision of telecommunications service to tribal areas. The concern expressed by the Joint Board regarding bidders' ability to collude[50] can be ameliorated by requiring advance disclosures of joint ventures and subcontracts.[51] Joint ventures and subcontracts may prove indispensable in enabling ETCs to choose the most efficient service combinations for each service area, leading to lower bids and bringing more affordable services to subscribers. Indeed, using satellites for exceedingly high-cost "loops" and other technologies for other "loops" can be far more efficient than limiting subcontracts or joint ventures among

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[48] This analogy is particularly apparent when the satellite telephone is an MXU.

[49] 47 C.F.R. 54.413

[50] *See* FNPRM, ¶ 100.

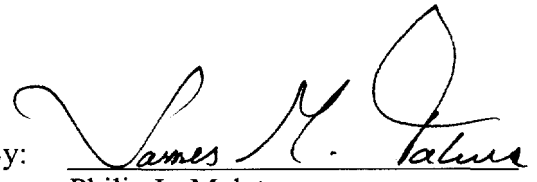
[51] The Commission may choose to require bidders in any auction for authorization to provide telecommunications services to a tribal area to identify all joint venture and subcontract agreements on a pre-auction application.

carriers. The bidding process, or the competitive market if bidding is not used, will tend to select the best mix of technologies and service providers. This, in turn, will minimize the cost of service to subscribers and the level of USF support needed to bring modern telecommunications to tribal areas.

V. CONCLUSION

The Iridium satellite system provides global telecommunications services and is accessible to all areas in the United States currently unserved by telecommunications carriers. With USF support, INA and other Iridium service providers will be better able to provide affordable telecommunications services to tribal lands and other unserved areas in the United States.

Respectfully submitted,

By: 

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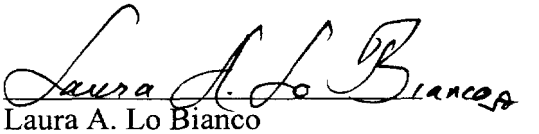
By: 

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